In the Claims:

- 1-20. (Canceled)
- 21. (Currently Amended) A semiconductor structure comprising:

a substrate;

two electrically conductive structures over the substrate, a subarea between the two electrically conductive structures being free of material;

a single layer of homogenous material containing including a compound comprising silicon, oxygen and nitrogen overlying the two electrically conductive structures;

an intermediate layer comprising an electrically insulating material overlying the layer of material containing silicon, oxygen and nitrogen; and

a covering layer overlying the intermediate layer and the subarea between the two electrically conductive structures such that the subarea comprises a material-free area that is sealed from the environment.

- 22. (Currently Amended) The semiconductor structure as claimed in claim 21, wherein the single layer of homogenous material containing including a compound comprising silicon, oxygen and nitrogen comprises \$\frac{\text{Si}_{1.00}\text{O}_{1.90}\text{H}_{0.27}\text{C}_{0.045}\text{N}_{0.06}\$. \$\frac{\text{Si}_{1.00}\text{O}_{1.90}\text{H}_{0.27}\text{C}_{0.045}\text{N}_{0.06}\$, wherein each of the index numbers (1.00, 1.90, 0.27, 0.045, 0.06) is variable by 20% upwards or downwards.
- 23. (Previously Presented) The semiconductor structure as claimed in claim 21, wherein the two electrically conductive structures comprise copper structures.

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- 24. (Previously Presented) The semiconductor structure as claimed in claim 21, wherein the material-free area comprises an airgap.
- 25. (Currently Amended) The semiconductor structure as claimed in claim 21, wherein the single layer of homogenous material containing including a compound comprising silicon, oxygen and nitrogen has been formed by a plasma-enhanced chemical vapor deposition process with nitrogen material being supplied during the supply of silicon material and oxygen material by means of an organic silicon precursor material.
- 26. (Previously Presented) The semiconductor structure as claimed in claim 21, wherein the intermediate layer is formed from silane-based silicon oxide.
- 27. (Previously Presented) The semiconductor structure as claimed in claim 21, wherein the covering layer comprises silicon oxide.
- 28. (Previously Presented) The semiconductor structure as claimed in claim 27, wherein the covering layer is formed based on ozone-activated decomposed tetraethyl orthosilicate.
- 29. (Currently Amended) A method for producing a layer arrangement, the method comprising:

forming a single layer of homogenous material including a compound comprising silicon, oxygen, and nitrogen over a substrate that has a plurality of electrically conductive structures and/or over a part of a surface of the electrically conductive structures, the single layer of homogenous material including a compound comprising silicon, oxygen, and nitrogen being formed using a plasma-enhanced chemical vapor deposition process with nitrogen being supplied

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during the supply of silicon and oxygen by means of an organic silicon precursor material, the single layer of homogenous material including a compound comprising silicon, oxygen, and nitrogen being formed in such a manner that an area free of material remains between the electrically conductive structures;

forming an intermediate layer comprising an electrically insulating material over the single layer of homogenous material; including a compound comprising silicon, oxygen, and nitrogen; and

selectively forming a covering layer over the intermediate layer such that the area free of material between the electrically conductive structures is sealed from the environment and forms a cavity.

- 30. (Currently Amended) The method as claimed in claim 29, wherein the homogenous material layer including a compound comprising silicon, oxygen and nitrogen comprises Si_{1.00}O_{1.90}H_{0.27}C_{0.045}N_{0.06}. Si_{1.00}O_{1.90}H_{0.27}C_{0.045}N_{0.06}, wherein each of the index numbers (1.00, 1.90, 0.27, 0.045, 0.06) is variable by 20% upwards or downwards.
- 31. (Canceled)
- 32. (Currently Amended) A semiconductor structure comprising:

two electrically conductive structures over a substrate, a subarea between the two electrically conductive structures being free of material;

a layer of material containing including a compound comprising silicon, oxygen and nitrogen overlying the two electrically conductive structures, wherein the layer of material containing including a compound comprising silicon, oxygen and nitrogen comprises

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 $Si_{1.00}O_{1.90}H_{0.27}C_{0.045}N_{0.06}$; $Si_{1.00}O_{1.90}H_{0.27}C_{0.045}N_{0.06}$, wherein each of the index numbers (1.00, 1.90, 0.27, 0.045, 0.06) is variable by 20% upwards or downwards;

an intermediate layer comprising an electrically insulating material overlying the layer of material containing silicon, oxygen and nitrogen; and

a covering layer overlying the intermediate layer and the subarea between the two electrically conductive structures such that the subarea comprises a material-free area that is sealed from the environment.

- 33. (Previously Presented) The semiconductor structure as claimed in claim 32, wherein the two electrically conductive structures comprise copper structures.
- 34. (Previously Presented) The semiconductor structure as claimed in claim 32, wherein the material-free area comprises an airgap.
- 35. (Previously Presented) The semiconductor structure as claimed in claim 32, wherein the layer of material containing silicon, oxygen and nitrogen has been formed by a plasma-enhanced chemical vapor deposition process with nitrogen material being supplied during the supply of silicon material and oxygen material by means of an organic silicon precursor material.
- 36. (Previously Presented) The semiconductor structure as claimed in claim 32, wherein the intermediate layer is formed from silane-based silicon oxide.
- 37. (Previously Presented) The semiconductor structure as claimed in claim 32, wherein the covering layer comprises silicon oxide.

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38. (Previously Presented) The semiconductor structure as claimed in claim 37, wherein the covering layer is formed based on ozone-activated decomposed tetraethyl orthosilicate.

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